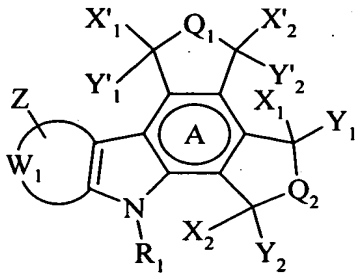
CLAIMS

Claims 1 – 20 (canceled)

21- (new) A compound selected from those of formula (I) :



(I)

wherein :

- **A** represents a saturated or partially or fully unsaturated ring, wherein the unsaturation optionally confers an aromatic nature on the ring,

- W_1, together with the carbon atoms to which it is bonded, represents phenyl or pyridyl,

- **Z** represents one or more identical or different groups of formula U–V wherein :
  - ✓ U represents a single bond, linear or branched (C_1-C_6)alkylene, linear or branched (C_2-C_6)alkenyl optionally substituted by one or more identical or different groups selected from halogen and hydroxy, and/or optionally containing one or more unsaturated bonds,
  - ✓ V represents a group selected from hydrogen, halogen, cyano, nitro, azido, linear or branched (C_1-C_6)alkyl, aryl, aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, hydroxy, linear or branched (C_1-C_6)alkoxy, aryloxy, aryl-(C_1-C_6)alkoxy in which the alkoxy moiety may be linear or branched, formyl, carboxy, aminocarbonyl, NR_3R_4, –C(O)–T_1, -C(O)-NR_3-T_1, –NR_3–C(O)–T_1, -O–C(O)–T_1, –C(O)–O–T_1, -NR_3-T_2-NR_3R_4, –NR_3–T_2–OR_3, –NR_3–T_2–CO_2R_3, –O–T'$_2$–NR_3R_4, -O-T'$_2$-OR_3, –O–T'$_2$–CO_2R_3, and –$S(O)_t$–R_3,

  wherein :

  ⇨ R_3 and R_4, which may be indentical or different, each represents a group selected

from hydrogen, linear or branched (C_1-C_6)alkyl, aryl, and aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, or

R_3 and R_4, together with the nitrogen atom carrying them, form a saturated monocyclic or bicyclic heterocycle that has from 5 to 10 ring atoms, and which optionally contains in the ring system a second hetero atom selected from oxygen and nitrogen, and which is optionally substituted by a group selected from linear or branched (C_1-C_6)alkyl, aryl, aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, hydroxy, linear or branched (C_1-C_6)alkoxy, amino, linear or branched mono-(C_1-C_6)alkylamino, and di(C_1-C_6)alkylamino in which the alkyl moieties may be linear or branched,

- ⇨ T_1 represents a group selected from linear or branched (C_1-C_6)alkyl which may be optionally substituted by a group selected from $-OR_3$, $-NR_3R_4$, $-CO_2R_3$, $-C(O)R_3$ and $-C(O)NR_3R_4$ wherein R_3 and R_4 are as defined hereinbefore; aryl, and aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched; or T_1 represents linear or branched (C_2-C_6)alkenyl optionally substituted by a group selected from $-OR_3$, $-NR_3R_4$, $-CO_2R_3$, $-C(O)R_3$ and $-C(O)NR_3R_4$ wherein R_3 and R_4 are as defined hereinbefore,
- ⇨ T_2 represents linear or branched (C_1-C_6)alkylene,
- ⇨ T'_2 represents a linear or branched (C_1-C_6)alkylene optionally substituted with one ore more hydroxy groups,
- ⇨ t represents integer of from 0 to 2 inclusive,

or Z represents methylenedioxy or ethylenedioxy,

- **Q_1** represents a group selected from oxygen, NR_2, wherein R_2 represents a group selected from hydrogen, linear or branched (C_1-C_6)alkyl, aryl, aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, cycloalkyl, cycloalkyl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, $-OR_3$, $-NR_3R_4$, $-O-T_2-NR_3R_4$, $-NR_3-T_2-NR_3R_4$, linear or branched (C_1-C_6)hydroxyalkylamino, di((C_1-C_6)hydroxyalkyl)amino, in which the alkyl moieties may be linear or branched, $-C(O)-R_3$ and $-NH-C(O)-R_3$; or R_2 represents linear or branched (C_1-C_6)alkylene substituted by one or more identical or different groups selected from halogen, cyano, nitro, $-OR_3$, $-NR_3R_4$, $-CO_2R_3$, $-C(O)R_3$, linear or branched (C_1-C_6)-hydroxyalkylamino, di((C_1-C_6)hydroxyalkyl)amino, in which the alkyl moieties may be

linear or branched, and -C(O)–NHR$_3$, R$_3$, R$_4$ and T$_2$ being as defined hereinbefore,

- **Q$_2$** represents a group selected from oxygen, NR'$_2$, wherein R'$_2$ represents a group selected from hydrogen, linear or branched (C$_1$-C$_6$)alkyl, aryl, aryl-(C$_1$-C$_6$)alkyl, in which the alkyl moiety may be linear or branched, cycloalkyl, cycloalkyl-(C$_1$-C$_6$)alkyl, in which the alkyl moiety may be linear or branched, -OR$_3$, –NR$_3$R$_4$, -O–T$_2$–NR$_3$R$_4$, –NR$_3$–T$_2$–NR$_3$R$_4$, linear or branched (C$_1$-C$_6$)hydroxyalkylamino, di((C$_1$-C$_6$)hydroxyalkyl)amino, in which the alkyl moieties may be linear or branched, –C(O)–R$_3$ and –NH–C(O)–R$_3$; or R'$_2$ represents a linear or branched (C$_1$-C$_6$)alkylene substituted by one or more identical or different groups selected from halogen, cyano, nitro, –OR$_3$, -NR$_3$R$_4$, –CO$_2$R$_3$, –C(O)R$_3$, linear or branched (C$_1$-C$_6$)hydroxyalkylamino, di((C$_1$-C$_6$)hydroxyalkyl)amino, in which the alkyl moieties may be linear or branched, and –C(O)–NHR$_3$, R$_3$, R$_4$ and T$_2$ being as defined hereinbefore,

- **X$_1$** represents a group selected from hydrogen, hydroxy, linear or branched (C$_1$-C$_6$)alkoxy, mercapto, and linear or branched (C$_1$-C$_6$)alkylthio,
- **Y$_1$** represents hydrogen, or
- **X$_1$** and **Y$_1$**, with carbon carrying them, together form carbonyl or thiocarbonyl,

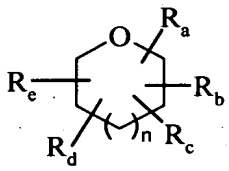
- **X$_2$** represents a group selected from hydrogen, hydroxy, linear or branched (C$_1$-C$_6$)alkoxy, mercapto and linear or branched (C$_1$-C$_6$)alkylthio,
- **Y$_2$** represents hydrogen, or
- **X$_2$** and **Y$_2$**, with carbon carrying them, together form carbonyl or thiocarbonyl,

- **X'$_1$** represents a group selected from hydrogen, hydroxy, linear or branched (C$_1$-C$_6$)alkoxy, mercapto and linear or branched (C$_1$-C$_6$)alkylthio,
- **Y'$_1$** represents hydrogen, or
- **X'$_1$** and **Y'$_1$**, with carbon carrying them, together form carbonyl or thiocarbonyl,

- **X'$_2$** represents a group selected from hydrogen, hydroxy, linear or branched (C$_1$-C$_6$)alkoxy, mercapto and linear or branched (C$_1$-C$_6$)alkylthio,
- **Y'$_2$** represents hydrogen, or

- **X'_2** and **Y'_2**, with carbon carrying them, together form carbonyl or thiocarbonyl,

- **R_1** represents a group selected from hydrogen, linear or branched (C_1-C_6)alkyl which may be optionally substituted by one or more groups selected from hydroxy, linear or branched (C_1-C_6)alkoxy, linear or branched (C_1-C_6)hydroxyalkoxy or NR_3R_4, the groups R_3 and R_4 being as defined hereinbefore ; or R_1 represents a group of formula (a) :



(a)

wherein :

- ✓ **R_a**, **R_b**, **R_c** and **R_d**, which may be identical or different, each represents, independently of the others, a bond or a group selected from hydrogen, halogen, hydroxy, linear or branched (C_1-C_6)alkoxy, aryloxy, aryl-(C_1-C_6)alkoxy in which the alkoxy moiety may be linear or branched, linear or branched (C_1-C_6)alkyl, aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, aryl, $-NR_3R_4$ wherein R_3 and R_4 are as defined hereinbefore, azido, $-N{=}NR_3$ (wherein R_3 is as defined hereinbefore), $-O-C(O)-R_5$ wherein R_5 represents linear or branched (C_1-C_6)alkyl (optionally substituted by one or more groups selected from halogen, hydroxy, amino, linear or branched (C_1-C_6)alkylamino, and di(C_1-C_6)alkylamino in which the alkyl moieties may be linear or branched); or R_5 represents aryl, aryl-(C_1-C_6)alkyl in which the alkyl moiety may be linear or branched, cycloalkyl or heterocycloalkyl,
- ✓ **R_e** represents methylene ($H_2C{=}$) or a group of formula $-U_1-R_a$ wherein U_1 represents single bond, methylene and R_a is as defined hereinbefore,
- ✓ **n** is 0 or 1,

it being understood that the group of formula (a) is bonded to the nitrogen atom by R_a, R_b, R_c, R_d or R_e,

its enantiomers, diastereoisomers, and addition salts thereof with a pharmaceutically acceptable acid or base,

with the proviso that the compound may not be :

- 3b,6a,6b,7-tetrahydro-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6-(2*H*,3a*H*,5*H*)-tetrone ;
- 5-ethyl-3b,6a,6b,7-tetrahydro-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6-(2*H*,3a*H*,5*H*)-tetrone ;
- 3b,6a,7,11c-tetrahydro-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6-(2*H*,3a*H*,5*H*)-tetrone ;
- 3b,6a,6b,7-tetrahydrofuro[3,4-a]pyrrolo[3,4-c]carbazole-1,3,4,6-(2*H*,3a*H*,5*H*)-tetrone ;

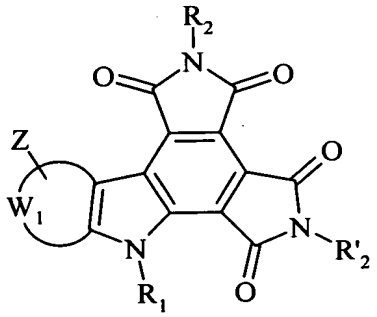
wherein aryl is understood to mean a phenyl, naphthyl, dihydronaphthyl, tetrahydronaphthyl, indenyl or indanyl group, each of those groups optionally being substituted by one or more identical or different groups selected from halogen, linear or branched (C_1-C_6)alkyl, linear or branched (C_1-C_6)trihaloalkyl, hydroxy, linear or branched (C_1-C_6)alkoxy, and NR_3R_4, R_3 and R_4 being as defined hereinbefore.

22- (new) A compound of claim 21, wherein X_1 and Y_1, with the carbon carrying them, together form carbonyl, X_2 and Y_2, with the carbon carrying them, together form carbonyl, X'_1 and Y'_1, with the carbon carrying them, together form carbonyl and X'_2 and Y'_2, with the carbon carrying them, together form carbonyl.

23- (new) A compound of claim 21 wherein Q_1 represents $-NR_2$.

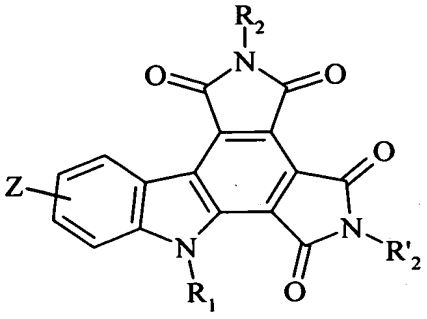
24- (new) A compound of claim 21 wherein Q_2 represents $-NR'_2$.

25- (new) A compound of claim 21 which is a compound of formula (IA) :



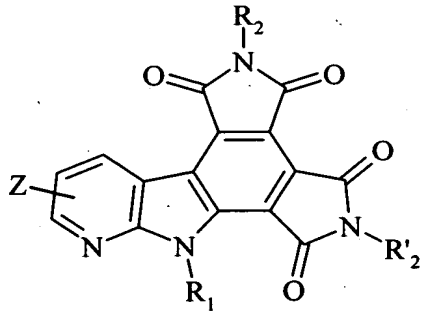
(IA)

26- (new) A compound of claim 21 which is a compound of formula (IB) :



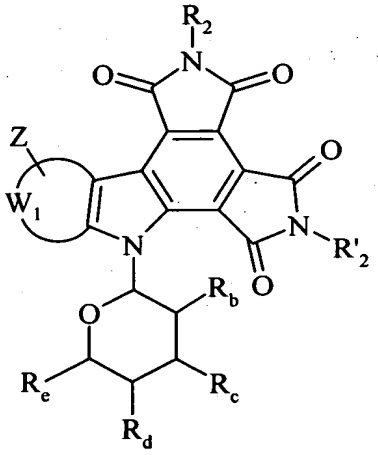
(IB)

27- (new) A compound of claim 21 which is a compound of formula (IC) :



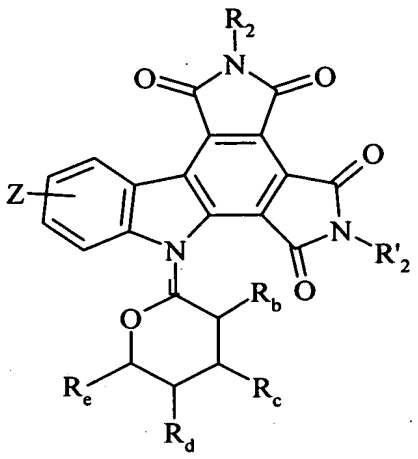
(IC)

28- (new) A compound of claim 21 which is a compound of formula (ID) :



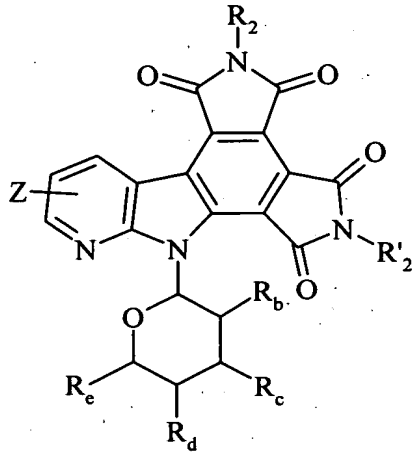
(ID)

29- (new) A compound of claim 21 which is a compound of formula (IE) :



(IE)

30- (new) A compound of claim 21 which is a compound of formula (IF) :

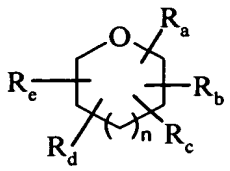


(IF)

31- (new) A compound of claim 21 wherein Z represents a group of formula U-V wherein U represents single bond and V represents a group selected from hydrogen, halogen, nitro, linear or branched (C_1-C_6)alkyl, hydroxy, linear or branched (C_1-C_6)alkoxy, aryl-(C_1-C_6)alkoxy in which the alkoxy moiety may be linear or branched, NR_3R_4, wherein R_3 and R_4 each represents a hydrogen atom.

32- (new) A compound of claim 21 wherein Z represents a group of formula U-V wherein U represents single bond and V represents a group selected from hydrogen, halogen, hydroxy, aryl-(C_1-C_6)alkoxy in which the alkoxy moiety may be linear or branched.

33- (new) A compound of claim 21 wherein R_1 represents hydrogen, linear or branched (C_1-C_6)alkyl or a group of formula (a) :



(a)

bonded to the nitrogen atom by Ra,

wherein :

- R_b, R_c, and R_d represent hydroxy, aryl-(C_1-C_6)alkoxy in which the alkoxy moiety may be linear or branched, -O-C(O)-R_5 wherein R_5 represents linear or branched (C_1-C_6)alkyl,
- R_e represents a group of formula U_1-R_a wherein U_1 represents methylene and R_a has the same definitions as R_b, R_c and R_d and n is 0,

34- (new) A compound of claim 21 wherein R_1 represents hydrogen.

35- (new) A compound of claim 21 wherein R_2 represents hydrogen, linear or branched (C_1-C_6)alkyl, OR_3, NR_3R_4, or linear or branched (C_1-C_6)alkylene substituted by OR_3, NR_3R_4 wherein R_3 and R_4 are as defined for formula (I).

36- (new) A compound of claim 21 wherein R_2 represents hydrogen, linear or branched (C_1-C_6)alkyl, linear or branched (C_1-C_6)alkylene substituted by NR_3R_4 wherein R_3 and R_4 are as defined for formula I.

37- (new) A compound of claim 21 wherein R'_2 represents hydrogen, linear or branched (C_1-C_6)alkyl, linear or branched (C_1-C_6)alkylene substituted by NR_3R_4 wherein R_3 and R_4 are as defined for formula (I).

38- (new) A compound of claim 21 which is selected from :

- 1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6(2*H*,5*H*,7*H*)-tetrone,
- 2-methyl-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6(2*H*,5*H*,7*H*)-tetrone,

- 2,5-dimethyl-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6(2*H*,5*H*,7*H*)-tetrone,
- 2-[2-(diethylamino)ethyl]-5-methyl-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6(2*H*,5*H*,7*H*)-tetrone, and
- 10-hydroxy-1*H*-dipyrrolo[3,4-a:3,4-c]carbazole-1,3,4,6(2*H*,5*H*,7*H*)-tetrone.

39- (new) A method for treating a living animal body afflicted with cancer comprising the step of administering to the living animal body an amount of a compound of claim 21, which is effective for alleviation of cancer

40- (new) A pharmaceutical composition useful in treating cancer comprising as active principle an effective amount of a compound of claim 21, together with one or more pharmaceutically acceptable excipients or vehicles.